Model 4305 IN

Digital (5kV) High Voltage Insulation Tester

CE

Features

- 2 Lines × 16 Characters LCD
- Microprocessor-controlled
- Tests insulation resistance up to 1 TΩ
- 4 Insulation test voltages: 500V, 1000V, 2500V, 5000V
- AC / DC Voltmeter (30~600V)
- Short-circuit current up to 5mA
- PI (Polarization Index) indication
- DAR (Dielectric Absorption Ratio) indication
- Auto-ranging on all insulation ranges
- Auto-hold function to freeze reading
- Overload protection
- Adjustable testing duration: 1~30 minutes
- Internal memory for data storage
- Displays testing duration for insulation measurement
- Auto-off function
- 200 measurement results can be saved in memory and recalled on display

Specifications

Test Voltage	500V	1000V	2500V	5000V
Insulation resistance	100GΩ / 500V	200GΩ / 1000V	500GΩ / 2500V	1TΩ / 5000V
Accuracy	±(5.0%rdg + 5dgt)			
Resolution	1000MΩ: 1MΩ	10GΩ: 0.01GΩ	100GΩ: 0.1GΩ	1TΩ: 1GΩ
Short circuit current	up to 5mA			
PI (Polarization Index)	√			
DAR	√			
Voltmeter	ACV: 30~600V(50/60Hz) DCV: 30~600V Accuracy:±(2.0%rdg + 3dgt) Resolution: 1V			
Current measurement	0.5nA ~ 0.55mA (Depending on the insulation resistance)			
Power source	Power source 1.5V "C" × 8 Alkaline batteries DC3V (CR2032) × 1			
Dimensions	250(L) × 190(W) × 127(D)mm			
Weight Approx.	2070g			
Safety standard	IEC / EN 61010-1 CAT IV 600V IEC / EN 61010-2-030 EN 61326-1			

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Special Functions

Voltmeter
Conventional insulation testers are highly susceptible to damage when testing insulation resistance while voltage is present on the measured object (whether ACV or DCV). To safely prevent damage, this new line of testers has the unique ability to sense voltage on a measured object. If any voltage is sensed, the tester will automatically switch to voltage detection mode and display the voltage finding on the LCD screen. This allows the user to prevent damage caused by attempting to measure insulation resistance while voltage is present.

DAR = Dielectric Absorption Ratio
The dielectric absorption ratio is the ratio of the insulation resistance measured at 1 min divided per the insulation resistance measured at 30 seconds. 30 seconds after starting a test, the tester will beep, indicating the operator that the resistance value measured at 30 seconds now has been saved internally. 1 minute after starting a test, the tester will beep again, indicating the user that the DAR result is now computed, and change the display format to now display the DAR result.

$$\text{DAR} : \frac{\text{1-min insulation resistance}}{\text{30-sec insulation resistance}}$$

PI = Polarization Index
The polarization index or PI is the ratio of the insulation resistance measured at 10 minutes divided per the insulation resistance measured at 1 minute. 10 minutes after starting a test, the tester will beep again, indicating the user that the PI result is now computed, and change the display format to now display the PI result.

$$\text{PI} : \frac{\text{10-min insulation resistance}}{\text{1-min insulation resistance}}$$

Tests on lower insulation resistance take longer, which tends to deteriorate the test specimen. Thus, higher DAR or PI readings (closer to 1) would indicate a better grade of insulation.

Accessories

Instruction manual
Test leads
Alligator clips
Carry case
Batteries
Shoulder belt

AL-58

AL-30AG
AL-30HB

AL-23CA

BET-2800

Carry case

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